UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,728	01/09/2005	Casimir Johan Crawley	PU020286	9711

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EXAMINER
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ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/520,728	CRAWLEY, CASIMIR JOHAN
	Examiner	Art Unit	
	RuiMeng Hu	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 August 2009_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-8 and 20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-8 and 20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 8/8/2009 have been fully considered but they are not persuasive.

Regarding claims 1 and 7, Applicant argued that Sakamoto fails to disclose "polling a decoder for detecting a loss of phase lock condition". In this case, actively checking a decoder or polling the decoder means that the component doing the polling is sending some sort of request to the decoder, and the decoder responds with information about its state. This is in contrast to a passive detection, where only the decoder's undisturbed output would be used.

The examiner respectfully submits that the above elaboration of polling by Applicant is not in the claims, the examiner suggests Applicant to include the above elaboration if Applicant believes that is the case, and to point out supports from the specification. The examiner gives the broadest reasonable interpretation of polling that is checking, thus column 3 lines 65-68 of Sakamoto recites "a phase lock recovery apparatus for a PLL circuit having a voltage controlled oscillator includes a detection circuit coupled to the PLL circuit for detecting whether a phase unlocked state occurred in the PLL circuit", thus the detection circuit is actively checking a status (or a decoder) for a loss of phase lock condition, and whether or not a phase unlocked (loss of lock) state is detected by the detection circuit reasonably reads on "polling for detecting a loss of phase lock condition".

Response to Amendment

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   **Claims 1-3 and 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Zuqert et al. (US 6466832)** in view of **Sakamoto (US Patent 4940951).**

Consider **claim 1**, Zuqert et al. disclose an apparatus, comprising: a radio

frequency control configured for entering a user-desired channel frequency selected

from a plurality of pre-defined frequency values (column 20 lines 1-11, via user interface

the user initiated switching to a different channel, to establish a better quality channel,

and such better quality channel is considered to be a user-desired channel); a reception

circuit including a frequency synthesizer (figure 7, a receiver 24, frequency synthesizer

326) configured for receiving an incoming wireless audio file signal from a computer

(column 10 lines 9-12); a decoder (DSP 270) for digitally demodulating an audio file

signal (abstract) from said reception circuit; and a processor (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2, the DSP is re-initialized for processing received signal on channel f2 (the new channel)) for re-initializing said decoder in response to a loss of a phase lock in said demodulating of said audio file signal and setting said frequency synthesizer (frequency synthesizer 326) at one of a plurality of pre-defined frequency values to re-establish said phase lock in said demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency) and sending the audio file to an audio system (figure 7, an audio system 44).

However Zuqert et al. fail to disclose a processor for polling the decoder for detecting a loss of phase lock condition in the demodulation of the audio file signal and re-initializing said decoder in response to the loss of a phase lock in said demodulating of said audio file signal.

In the same field of endeavor, Sakamoto disclose a receiver (figures 1 and 4, PLL 16, column 3 line 58-column 4 line 10, column 7 lines 18-61) for receiving an RF signal; a decoder (figure 4, QPSK demodulator 14 and PCM decoder 20) for demodulating said signal; and a processor (figure 4, column 3 lines 65-68, a detection circuit and the PLL circuit) configured to poll (continuously detecting for an unlocked state) said decoder for a loss of a phase lock loop in said demodulating of said signal to detect audio file signal loss between the receiver and a transmitter (an unlocked state to be detected when the signal loss in transmission) and re-initializing said decoder in response to the loss of a phase lock in said demodulating of said audio file signal (re-

initializing phase lock of said QPSK demodulator 14) (Note: PCM is the standard form

for digital audio).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Sakamoto into the art of Zuqert et al. as to include PLL 16 of figure 1 or 4 for improving

QPSK demodulation.

Consider **claim 2 as applied to claim 1**, Zuqert et al. as modified disclose

wherein said plurality of frequencies comprises 900MHz range channel frequencies

(Zuqert et al. column 16 lines 58-62).

Consider **claim 3 as applied to claim 2**, Zuqert et al. as modified disclose

wherein said plurality of frequencies comprises 905 MHz, 911 MHz, 917 MHz and 923

MHz (Zuqert et al. column 16 lines 58-62).

Consider **claim 5 as applied to claim 1**, Zuqert et al. as modified fail to disclose

wherein said demodulating said audio file signal provides a digital audio stream

conforming to an I2S audio format.

However, official notice is taken that I2S is used for digital electronic devices (as

a CD player) is well known in the art. Therefore, it would have been obvious to a

person of ordinary skill in the art at the time the invention was made to use I2S interface

to correspond the existing digital audio stream, and output stereo.

Consider **claim 6 as applied to claim 1**, Zuqert et al. as modified disclose

wherein said processor is a microprocessor (Zuqert et al. figure 7, DSP 270).

Consider **claim 7**, Zuqert et al. disclose a computer readable storage device having software instructions recorded thereon that, (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, performs the steps of: receiving a modulated audio file signal from a computer (figure 7, Abstract, column 10 lines 9-12); demodulating said audio file signal to a digital audio stream (figure 7, down-converters 38, base-band processors 40); polling for detecting a loss of phase lock condition in the demodulation of the audio file signal" (the deployment of the current channel) is known/detected to the processor of the receiver; re-initializing said demodulating in response to a loss of a phase lock in said demodulating of said audio file signal (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2, the DSP is initialized for processing received signal on channel f2 (the new channel)); and setting said receiving of the modulated audio file signal at one of a plurality of channel frequencies to re-establish said phase lock in said demodulating of said audio file signal (re-establishing signal processing as switched to the new frequency); and sending the audio file signal to an audio system (figure 7, an audio system 44).

However Zuqert et al. fail to disclose detecting a loss of phase lock condition in the demodulation of the audio file signal; re-initializing said demodulating in response to the loss of a phase lock in said demodulating of said audio file signal.

In the same field of endeavor, Sakamoto disclose a receiver (figures 1 and 4, PLL 16, column 3 line 58-column 4 line 10, column 7 lines 18-61) for receiving an RF signal; a decoder (figure 4, QPSK demodulator 14 and PCM decoder 20) for

demodulating said signal; and a processor (figure 4, column 3 lines 65-68, a detection

circuit and the PLL circuit) configured to poll (continuously detecting for an unlocked

state) said decoder for a loss of a phase lock loop in said demodulating of said signal to

detect audio file signal loss between the receiver and a transmitter (an unlocked state to

be detected when the signal loss in transmission) and re-initializing said demodulating

in response to the loss of a phase lock in said demodulating of said audio file signal (re-

initializing phase lock of said QPSK demodulator 14) (Note: PCM is the standard form

for digital audio).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Sakamoto into the art of Zuqert et al. as to include PLL 16 of figure 1 or 4 for improving

QPSK demodulation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Zuqert et**

al. (US 6466832) as modified by **Sakamoto (US Patent 4940951)** in view of **Bowles**

(US Patent 6389548).

Consider **claim 4 as applied to claim 1**, Zuqert et al. as modified fail to disclose

wherein said decoder comprises an eight-to-fourteen modulation EFM digital decoder.

This teaching is extremely well known in the art as disclosed by Bowles (US Patent

6389548), figure 3, EFM decoder 38. Therefore, it would have been obvious to a

person of ordinary skill in the art at the time the invention was made to include an EFM

digital decoder to output CD audio.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Zuqert et al. (US 6466832)** as modified by **Sakamoto (US Patent 4940951)** in view of **Bowles (US Patent 6389548).**

Consider **claim 8 as applied to claim 7**, Zuqert et al. as modified fail to disclose wherein said demodulating comprises a digital eight-to-fourteen modulation EFM digital decoding of said audio file signal. This teaching is well known in the art as disclosed by Bowles (US Patent 6389548), figure 3, EFM decoder 38. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an EFM digital decoder to output CD audio.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Zuqert et al. (US 6466832)** as modified by **Sakamoto (US Patent 4940951)** in view of **Champion (US Pub. 2002/0072817).**

Consider **claim 26 as applied to claim 1**, Zuqert et al. as modified fail to disclose a radio frequency remote control configured for entering a user-desired channel frequency selected from a plurality of pre-defined frequency values.

In the same field of endeavor, Champion discloses a wireless audio system comprising a radio frequency remote control configured for entering a user-desired channel frequency selected from a plurality of pre-defined frequency values (paragraphs 39 and 55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by

Champion into the art of Zuqert et al. as modified as to permit the user to initially select

a user-desired channel.

Nonstatutory Double Patenting

5.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422
F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d)
may be used to overcome an actual or provisional rejection based on a nonstatutory
double patenting ground provided the conflicting application or patent either is shown to
be commonly owned with this application, or claims an invention made as a result of
activities undertaken within the scope of a joint research agreement.
        Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

6.   **Claims 1-8 and 26** are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over **claims 1, 7 and 8 of**

copending Application No. 10516859 in view of **Zuqert et al. (US 6466832)**.

        Consider **claim 7**, claim 7 claims a computer readable medium containing

software instructions that, when executed by a processor, performs the steps of:

receiving a modulated audio file signal; demodulating said audio file signal to a digital

audio stream; detecting a loss of phase lock condition in the demodulation of the audio

file signal; re-initializing said demodulating in response to a loss of a phase lock in said

demodulating said audio file signal; and setting said receiving at one of a plurality of channel frequencies to establish said phase lock in said demodulating.

Claim 7 of the copending application discloses a computer readable medium containing software instructions that, when executed by a processor, perform the steps of: receiving a modulated audio file signal; demodulating said modulated audio file signal; polling said demodulating for a loss in a phase lock in said demodulating; and re-setting and reinitializing said demodulating in reply to said loss in said phase lock.

However, claim 7 of the copending application fails to disclose a frequency synthesizer for providing a plurality of frequencies.

In the same field of endeavor, Zuqert et al. disclose a computer readable medium containing software instructions that, (column 16 lines 33-45, the processor containing software instructions adaptively controls operation of the receiver), when executed by a processor, performs the steps of: receiving a modulated audio file signal from a computer (figure 7, Abstract, column 10 lines 9-12); demodulating said audio file signal to a digital audio stream (figure 7, down-converters 38, base-band processors 40); re-initializing said demodulating in response to signal quality of said demodulating said audio file signal (DSP 270, figure 8, column 17 line 53-column 20 line 11, consider switching from frequency f1 to f2 in response to received signal quality (error rate and signal strength), the DSP is initialized for processing received signal on channel f2 (the new channel)); and setting said receiving at one of a plurality of channel frequencies to establish receiving signal quality and said demodulating of said audio file signal (re-

establishing signal processing as switched to the new frequency); and sending the

audio file signal to an audio system (figure 7, an audio system 44).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to incorporate the selection techniques taught by

Zuqert et al. into the invention of the copending application as to include said frequency

synthesizer for improving signal quality and output audio quality, wherein said frequency

synthesizer generates a plurality of channel frequencies (902-928 MHz) to provide

channel frequency diversity to over come poor signal quality (i.e. bit error rate) in short

range radio frequency communication.

The above reasons also apply to claim 1.

This is a provisional obviousness-type double patenting rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to: Commissioner for Patents
                    P.O. Box 1450
                    Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

            Customer Service Window
            Randolph Building
            401 Dulany Street
            Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m.,

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/RuiMeng Hu/
R.H./rh
December 2, 2009

/Edward Urban/

Supervisory Patent Examiner, Art Unit 2618